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Disseminating Climate Change Research Information through Theatre: Afram Plains, Ghana and Bagamoyo, Tanzania Experience

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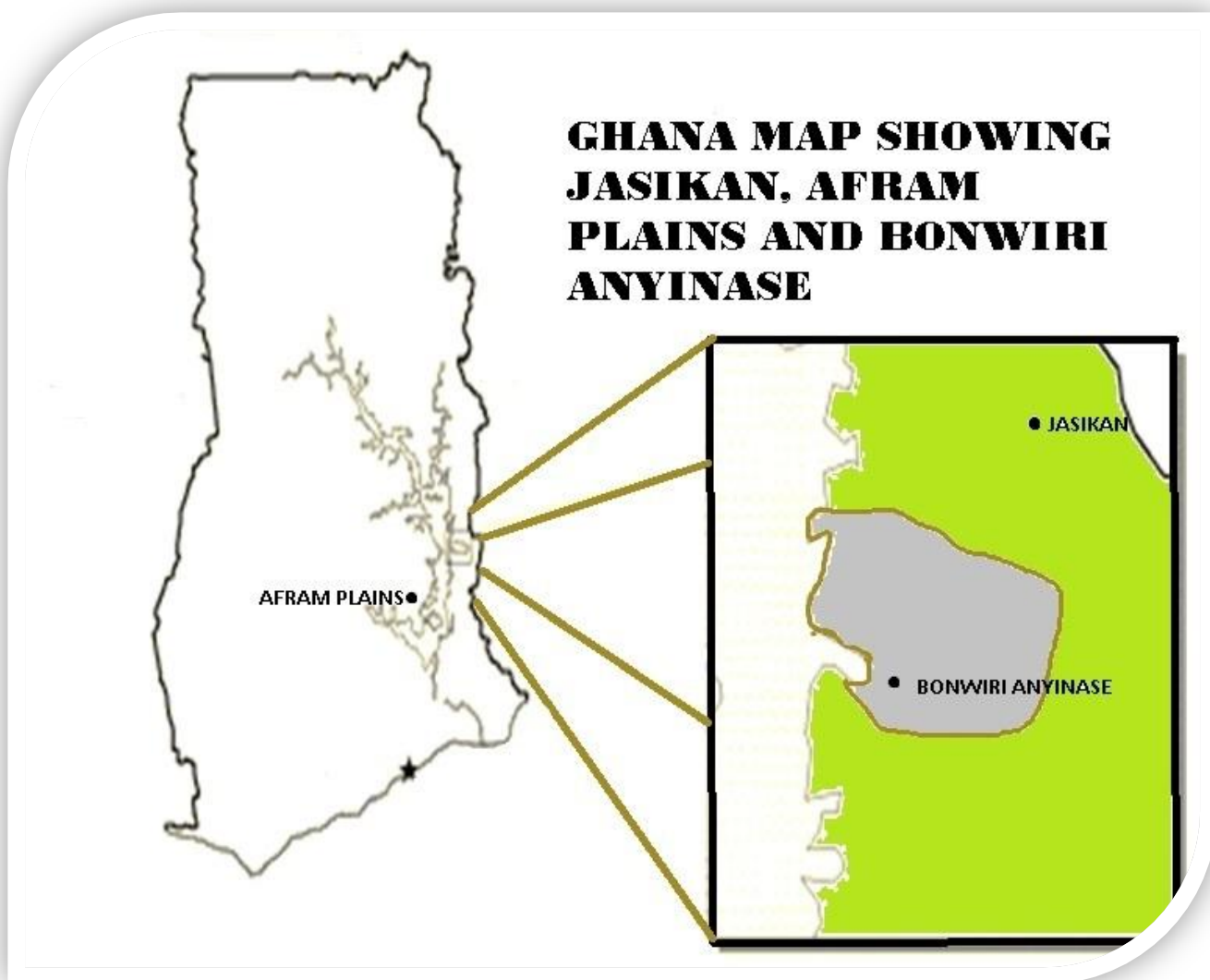
Abstract

Scientists, social scientists and scholars in the humanities have all become apprehensive about what climate change is and why it must be thematized, discussed and communicated. Various Agencies, including bodies, organizations and educational institutions have engaged themselves with issues on climate change and are committed to proactively intervene academically, financially, and politically with good will support. This paper presents a report on research conducted in two African countries, namely, Ghana and Tanzania, based on an assessment and evaluation of the use of Theatre as an extensive communicative and artistic medium, available for all stakeholders. The objective of this paper therefore, is to present a report on some of the insights, field observations, processes, findings, outcomes, challenges, recommendations and suggestions, for the perusal of interested scholars and Institutions who might find the document useful, with the aim of documenting the *ALCCAR* climate change research for posterity and also share the *ALCCAR* projects with other scholars. The paper is further aimed at effectively communicating climate change information particularly to rural African dwellers and finally to examine and preserve some indigenous knowledge on climate change indicators. The use of theatre and some visuals (Overhead projections) to support the presentation is a strong methodology to be employed.

Introduction

In 2010 Petra Tschakert coordinated a Climate Change project dubbed *ALCCAR*, an acronym for Anticipatory Learning for Climate Change and Resilience. It was a collaborated effort between Social Scientists, Pure Scientist, Fine Arts Experts, Meteorological Scientist, Climatologists and indigenous seasonal experts in three (3) African rural communities. The communities in Ghana are namely, Donkorkrom and its environs of the Afram Plains in the Eastern Region, Bonwiri Anyinase in the Biakoye Constituency in the Volta Region, which was originally in the Buem District and the Bagamoyo community in the Moshi District around the Kilimanjaro Mountains of Tanzania, as well as the Database Centre, situated on the campuses of the Pennsylvania State University in the United States of America.

Having worked in the two Ghanaian Lab sites, Bagamoyo only became the last point of focus in view of the envisaged continental scope of the project. Since the West African climatic and cultural conditions differ distinctly from that of East Africa, the choice of these two locations offer a convincing platform for stronger comparative studies and pronounced observations and conclusions on climatic change.



WHO, WHAT, AND WHERE.

We look at adaptive capacity using the concept of **anticipatory learning**, defined as learning about the future before impacts are apparent. Our team is not only interested in how **communities**

respond to the impacts of climatic changes, but how **iterative social learning** may enhance people's capacity to make **flexible decisions** in the face of **uncertainty**.

THE ADAPTATION DEBATE

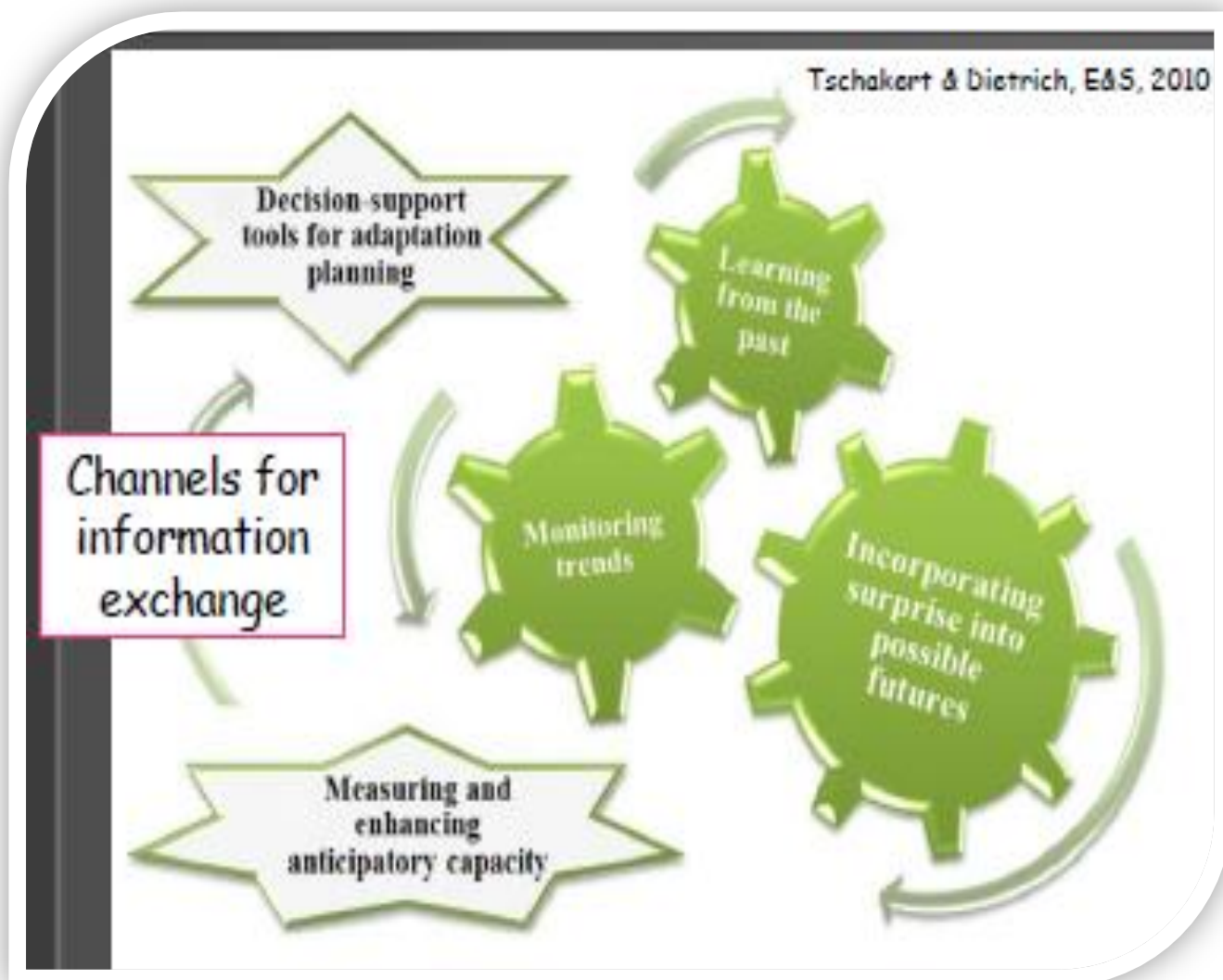
Adaptation provides a vital entry point to enhancing the **capacity** of the most vulnerable individuals and groups in the face of **climatic change and uncertainty**, as noted in the Nairobi Work

Programme. However, we know too little about the **decision making processes** that shape adaptation and resilient livelihoods, and this for two(2) reasons:

- From a conceptual perspective, the current debate focuses **too much on responding to the predicted climate change impacts** for some specified time in the future (2025 or 2050), rather than **addressing the underlying factors** that shape vulnerability and adaptation action.
- Our existing methodological toolbox is **sparsely equipped** to initiate and sustain **adaptive and anticipatory learning**, especially at the community level. Our methodological framework stresses

An **iterative way of learning** about uncertainties and changes by viewing adaptation as a **socio-institutional process** with **cycles of anticipation and responses** to multiple stressors.

DIAGRAM ONE



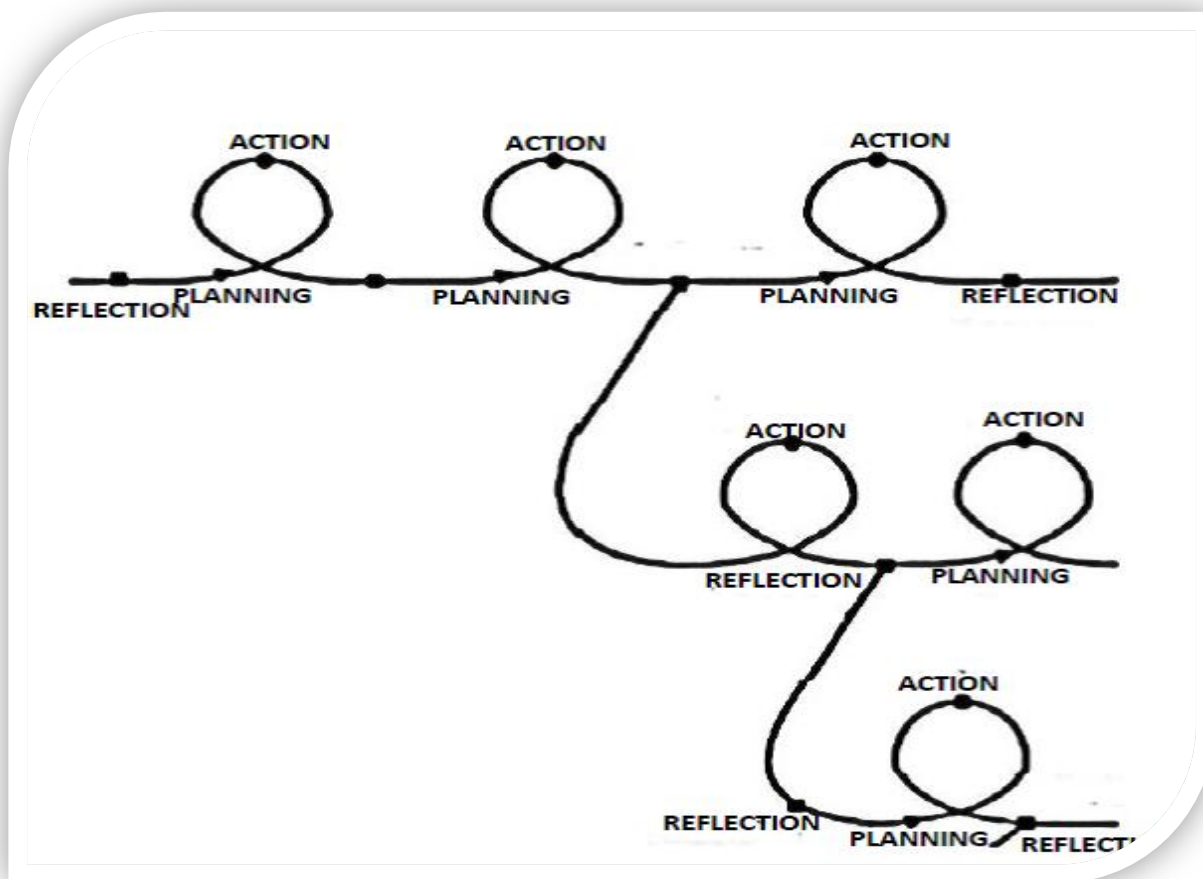
THEORETICAL AND CONCEPTUAL FRAMING

We identify **two (2) theoretical frameworks** that address learning processes from a **dynamic systems perspective**:

Participatory action research and resilience thinking.By also drawing from **educational theories and landscape and place**, we view the dynamic interaction between **memory, nodes of**

reflection, iterative learning and re-performance as the prerequisite for anticipatory action and, ultimately, for adjustments as well as (radical) system transformation.

DIAGRAM TWO



Anticipatory Learning for Climate Change Adaptation:

These insights from Complex Cycles and Participation Action Research (PAR) reveal three (3) major challenges for **anticipatory learning in climate change adaptation:**

- How do we acknowledge and incorporate **uncertainty and surprise** in an iterative social learning process built upon a systems view?
 - Pay attention to slow changing variables
 - Learn about frequencies of extreme events
 - Envision rapid changes with potentially catastrophic shifts
- How do we monitor and learn from past events and actions while anticipating the future?
 - Be attentive to accumulated knowledge
 - Explore potentials for renewal and reorganization
- How do we validate different types of knowledge and address power imbalances among multiple and diverse groups of stakeholders?
 - Acknowledge within and between-group inequalities
 - Consider different climatic understandings

Methodology: No Learning by Shock!

1. **Methodology: No Learning by Shock!**

DIAGRAM THREE



Anticipatory Learning Baseline:

In June 2009, we started our fieldwork in three communities in the Afram Plains of Ghana. We began with a baseline on anticipatory learning, so that we may later be able to identify the effectiveness of anticipatory learning tools (steps 5 and 6, above).

First, in a large group setting, characteristics that the community considers of relevance for anticipatory learning are captured. Next, groups of men and women separately evaluate how well the community does on specific elements of these anticipatory learning characteristics. To do this, participants create “spider grams”. Each spoke of the spider gram represents a different characteristic of anticipatory learning.

The group then ranks the current ability of the community at achieving each characteristic. The resulting diagram clearly shows weak spots. Using the metaphor of the spider web, community members can see the “holes” in their own community “webs” where they might be able to improve their effectiveness at learning about and preparing for the future.

DIAGRAM FOUR:



OBSERVATIONS AND LESSONS FROM AFRAM PLAINS

Travelling from Accra to Nkawkaw on public transport with a team of experts of various intellectual fields and professions, did not just give a unique opportunity for the development of stronger ties among these experts but also magnetized the quick and yet solid critical analysis and responses to exchanges of ideas and expertise. Crossing the Volta Lake at the Donkorkrom ferries was also symbolically punctuating in the entire process of writing a new story by a bunch of experts examining RESILIENCE in climate change mitigation in a research work.

Pre-colonial climate of the Afram Plains, as narrated by local experts and some notable inhabitants has changed drastically and what we have now offers a different scenario altogether. Pre-colonial Afram Plains was a forested plain. However, the Post-Independence climate of the Afram Plains, affected by the sharp climatic differences, was triggered off by the creation of the Akosombo Dam in the 1960s. This is a woeful representation of the original climatic condition. The Dam dealt a devastating blow not only to the sources of livelihood of the dwellers of the Afram Plains and the displacement of local populace, but was also a serious climatic, agronomic, agricultural, ecological and socio-cultural catastrophe. The research covered places like Donkorkrom, Tiase, Xedzodzokofie, Maame Krobo, Domnase, to mention but a few. A careful study of the data collected gives a revealing scenario worth mentioning. To quote the Domnase Assemblyman:

“Our forebears never crossed any lake from the Eastern Region to the Volta Region. The Plains were even cultivated with cocoa and other cash crops. The creation of the Dam and the subsequent overflow of water into the plains led to a sharp change in our living conditions as observed today; Afram Plains has become drier; the agronomical conditions worsened; cocoa is nowhere to be seen; our forest metamorphosed into dry vegetation with ruminants serving as death traps on the lake.”

An indigenous priest also observes and sums up his thoughts in the ensuing quotation, as follows:

“Out of greed, humanity keeps offending nature. We had lived peacefully up until a dam, meant to bring development and industrialization was created, swelling up and swallowing our very source of livelihood and the very core of our religiosity and spirituality. Our gods are angry and are fighting back... Perhaps man may learn better”.

A One-man *Charismatic* Church pastor further observes that:

“Humanity”, as observed in the Afram Plains, “knows no bound and would crave for more and more, allowing over materialism, luxurious lifestyle, greed and infatuation to blind them and sway them away from their roots and origins.”

To him, he is establishing a church in Afram Plains to help check this attitude. But some have only come to exploit them.

DISCUSSION FORUM

A discussion forum was held at the APDO Centre, an NGO that has done lots of community work in the Afram Plains with the view to helping to educate the dwellers of the Afram Plains on various issues affecting them. They spear-headed the collection of data within the communities of Afram Plains mentioned earlier. The communities were brought together on three occasions to exchange ideas, handle data collected and process the data into (story-lines) and storylines which are turned into indigenous plays for community-based performances. The Pennsylvania State University team contributed a much more scientific definition of climate change. The impact of climate change on people living in the Northern and Southern parts of our African continent supported, with pictures from around the world, illustrating how the ice-caps of the North and South Poles have been affected by factors that increase the negative impact and effect of climate change on humanity. Forestation and deforestation factors, which were strongly raised by the Ghanaian team as one of the general causes of climate change, was surprisingly dismissed by our Tanzanian counterparts as ‘a no beginner point’ for the cause of climate change. The forum discussion, however, revealed that industrialized nations of the North and West are mainly to blame.

OBSERVATIONS AND LESSONS FROM BOWIRI

Bowiri Anyinase is a small indigenous community located in the forest area of the Volta Region, on the Akuapim-Togo range and specifically in an area called the Kutuatu Mountains. The Bowiri people relocated from the coastal Moree community of the Central Region. Historically, their present settlement offered the needed protection from the Ashanti Expansionism of the late seventeenth century. Kutuatu later became a religious centre for the area. According to pre-colonial Buem traditions, the plateau of Kutuatu served as an altar for Attiblu (God Almighty). Their indigenous priests were native meteorologists, climatologists and astrologists. Speaking to the paramount chief of Bowiri it was revealed that as a farmer’s life was dependent on good weather, with a balance between rainfall and dry season, any sacrilegious offence led to the god of the land punishing them with extreme weather conditions like prolonged rainy seasons or protracted dry seasons. Both conditions often led to poor harvests for the community. Kutuatu, as a sacred shrine, became a meeting point for atonement. A cow, fattened for over a year, would have to voluntarily go up the mountains and lay its head on the altar for sacrifice. This ritual was the duty of the chief priest. It was to ensure that an amicable intervention was met. Nana Salo opines that:

“Civilization, modernity, Christianity and Western Education have all contributed in both positive and negative ways on the Bowiri people”.

What therefore has ALCCAR to offer in the mitigation of the negative impact of climate change on the poor rural dwellers of Africa, especially the Bowiri?

In an answer to this, Petra said:

“Knowledge is power and to be informed is to be forewarned. Possibly, ALCCAR has contributed in the creation of the platform for serious discussions which might lead to deeper insights, interventions and resilience. This project motivated a few of the research assistants, leading to the decision by the following scholars:

1. Kate Dietrich from Penn state University;
2. Yaw Boafo from the Geography Department, University of Ghana; and
3. Winfrey Oteng from the School of Performing Arts – University of Ghana; to enroll in a PhD and Masters Programs respectively, with specific interest in climate change related studies and to engage in further interrogations in this area. All the three scholars were supported by ALCCAR, either financially or materially and have all since graduated successfully after their courses.

Bowiri as a community has become conscious of why their local efforts of conserving and preserving their environmental and ecological resources should not be down played. The Kutuatu altar on the plateau of the Akuapim-Togo range, for its religious significance and premium, has over the years been jealously guarded and protected from bush fires. It thus, qualifies as one of the world's well conserved tropical forest zones and is worthy of being listed in either the UNESCO world heritage list of recorded preserved geographical sites or published in the Reader's digest as such. A rain gauge and barometer centre has also been set up in Bowiri for monitoring and recording rainfall patterns by the ALCCAR project and the Bowiri communities. This is a form of academic climate change experience worth mentioning.

OBSERVATIONS AND LESSONS FROM THE BAGAMOYO COMMUNITY

The Dar el Salam University team is led by Dr Laringi Louse; Mr. Kejo, the National Director of the Red Cross Society and a group of young scholars and students. It brought the project team into contact with the Bagamoyo community in the Moshi District of Tanzania, near Mount Kilimanjaro, where one of the climate change conservatory and observatory stations is conspicuously situated. There could not have been any other place to observe some of the impact of climate change on the African continent and its implications on the world as a whole than where Mount Kilimanjaro stands. The indigenous experts were drawn from the Bagamoyo and the Moshi communities to perform plays based on their understanding of what leads to climate change which they were experiencing in the pattern of the weather in their communities. Dr. Julius Nyerere, an astute scholar and the first President of Tanzania, laid a solid and sound foundation for a well groomed Tanzanian economy. Mualimu Nyerere, was inspired by Osagyefo Dr. Kwame Nkrumah of Ghana, to offer his people the OGAMA system, which provided alternative solutions, based on self-help and domestication, pointing to agro-forestry revelations. The Bagamoyo trip from Dar el Salam to Moshi was an eye opener to efforts African leaders have made over the years to bring economic and political prosperity and stability to their people.

While respondents from Afram plains mentioned cocoa as their main stay, Bagamoyo and Moshi were mentioning jute production. However, the plantations in Tanzania have largely been abandoned, leaving visible defunct factories as testimonies. While political and economic factors might quickly be assigned as the cause of the abandonment of the jute making industry in Tanzania, the ALCCAR research team also uncovered climate change as another factor affecting agro-business in East Africa. The farmers who constituted the drama troupes managed to reflect community life in their pre-colonial, colonial, pre-independence, independence and post-independence eras. All these stages reflected the post-independence era as times when harsher livelihood and gloomy economic conditions prevailed.

The impact of climate change was visibly observed during our flight over the Kilimanjaro Mountains. It was clearly observed that the continuously melting ice-caps on the high mountain peaks was gradually laying bare the magnetic poles in the mountain, thereby resulting in the turbulence experienced by airplanes flying over the age old Kilimanjaro Mountain. The flight turbulence that our airplane went through was a food for thought indeed. A visit to the foot of the same mountain also confirms the future catastrophic climatic implications awaiting the immediate inhabitants in and around the Moshi communities, first of all and Africa as a whole.

Torrential rain falls and unexpected floods, coupled with protracted droughts and poor crop yields are crippling the economy of the rural dwellers of the Bagamoyo and the Moshi communities, thus bringing unbearable hardships unto the people. All these were reflected in the performances the rural community members put up during the creative process of the ALCCAR Project.

General Observations

There is no doubt that the ALCCAR climate change project has contributed in no mean way to the general understanding of what climate change is and above all in the process of educating and conscientizing rural dwellers of both West and East African rural communities. Throughout this project, the platform was created to discuss local and scientific understandings of the impact of climate change on rural folks and therefore their preparations and empowerment to face the challenges ahead of them. Refusing to openly discuss climate change is like the proverbial burying of heads in the sand by the ostrich. Networking to communicate and disseminate research findings across the continent is highly important and commendable. ALCCAR has therefore shown the way for others to follow. Consequently, interdisciplinary efforts to mitigate climate change across the Globe should be intensified and consciously promoted among world Universities and Scholars.

Conclusion

To conclude, climate change should be considered as an unavoidable subject and a pressing natural reality. It has come to stay and therefore calls for a consented and concerted effort by all stakeholders in the form of a united intellectual, social, political, financial and academic goodwill to stand up and promote its concomitant impact. Compared to the colossal challenges facing climate change today, the ALCCAR project is in fact just the tip of the ice-berg. Many more hands are needed on deck. It is often said that ignorance is no excuse and in fact is deadlier and most dangerous.

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and, most importantly, committed community members from Ghana and Tanzania.

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